

GBPPR 'Zine



Issue #111 / The Monthly Journal of the American Hacker / July 2013

"Unfortunately, you've grown up hearing voices that incessantly warn of government as nothing more than some separate, sinister entity that's at the root of all of our problems. Some of these same voices do their best to gum up the works. They'll warn that tyranny is always lurking just around the corner. You should reject these voices. Because what they suggest is that our brave, and creative, and unique experiment in self rule is somehow just a sham with which we can't be trusted."

--- Excerpt from Barack Hussein Obama's May 5, 2013 commencement address at Ohio State University.

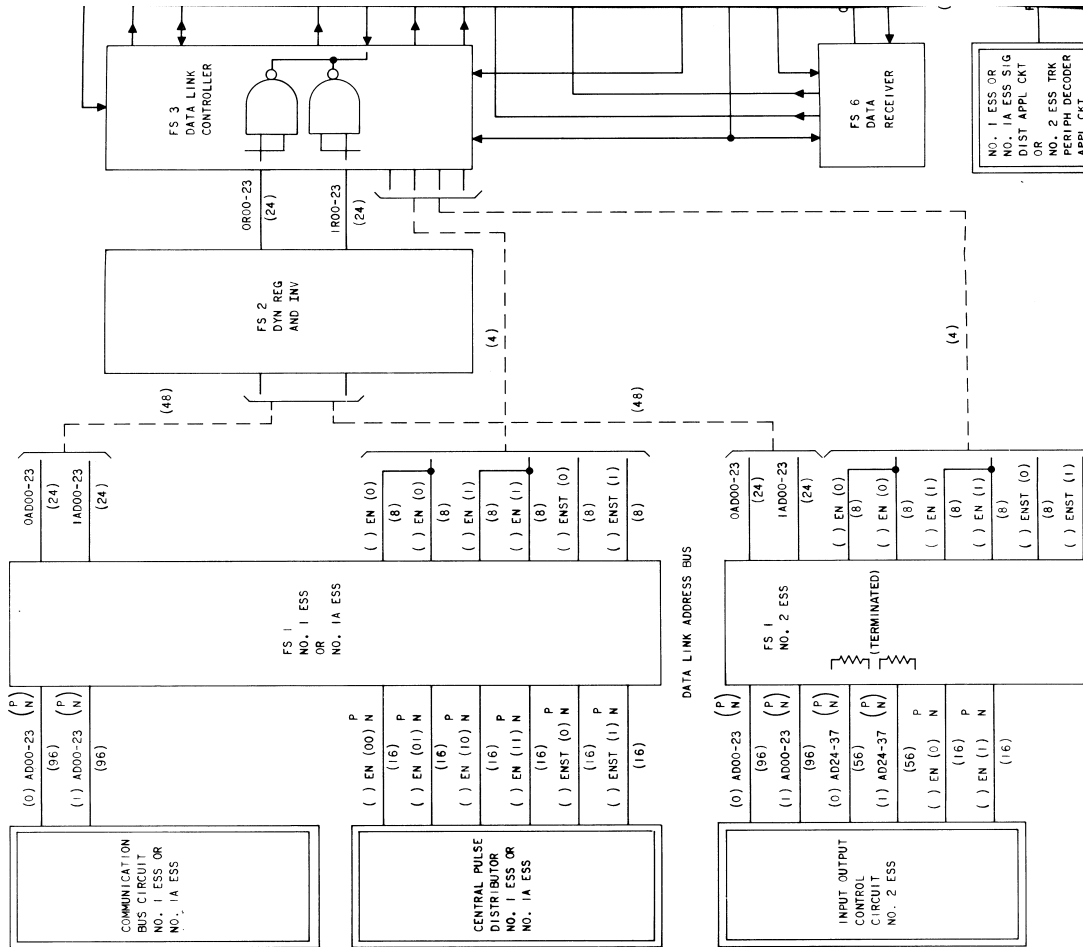
Jeremy Hammond, Barrett Brown, Bradley Manning, Andrew Auernheimer, Michael Hastings, Aaron Swartz, Adam Kokesch, Mercedes Haefer, Kim Dotcom, Edward Snowden, William Binney, Thomas Drake, Kyle Myers, Julian Assange, Kevin Mitnick, Ed Cummings, Marty Kasier, James Atkinson, various reporters at the Associated Press and FOX News, and anyone who uses AT&T, Verizon, the Internet, etc. would probably all disagree...

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Centrex Data Loop and Console Control – Description & Theory / #1A ESS – Part 2



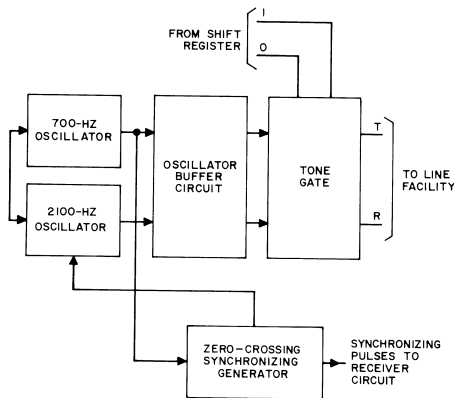


Fig. 7—Basic Data Transmitter—Block Diagram

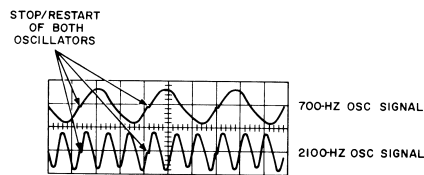


Fig. 8—Transmitter Oscillator Waveforms

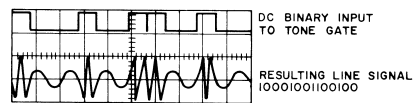


Fig. 9—DC Binary Signal and Resulting Line Signal

5.17 When a mark signal is received from the line amplifier, the line signal sampler sets the mark-space (MS) flip-flop. At the end of each

bit interval, a synchronizing pulse from the zero-crossing sync generator interrogates the state of the MS flip-flop. Each received mark and space signal is converted into a 1 or a 0, respectively, and is inserted into the lowest numbered cell of the shift register.

5.18 The end of a received data word is determined by the bit counter which counts the number of bits received. When the bit count indicates that a complete word has been received, the receiver and the transmitter return to an idle mode. Similar bit counters are located at both the central office end and the remote end of the data loop.

6. THEORY — CONSOLE LAMP CONTROL AND KEY SIGNALING

CONSOLE LAMP CONTROL

6.01 The states of the attendant telephone console lamps are controlled by a centrex console lamp control circuit located in the centrex console control cabinet. The controlling lamp data is received from the data loop by means of the lamp data receiver circuit and is temporarily stored in the data shift register. The received data is decoded and applied to operate bipolar ferreed switches in lamp state memory units. The ferreed switches connect the selected lamp to ground for steady or to a lamp interrupter for the various flashing rates.

6.02 Console lamps are arranged into eight groups for control purposes. When a lamp data word is transmitted to a customer location, it is addressed to one of these lamp groups and to a particular console control position.

6.03 The lamp data word received consists of a leading 1 and a control bit plus a 24-bit data word. The two leading bits only perform administrative functions and are not considered part of the data portion of the word.

- Bit 24 (cell C) is used to provide an initial 1 for the word being transmitted back to the central office. It is set as soon as the incoming initial 1 is detected and shifted to the output cell (ST, bit 25) at the next zero-crossing.
- Bit 25 is the initial 1 transmitted from the central office. It is set only at the

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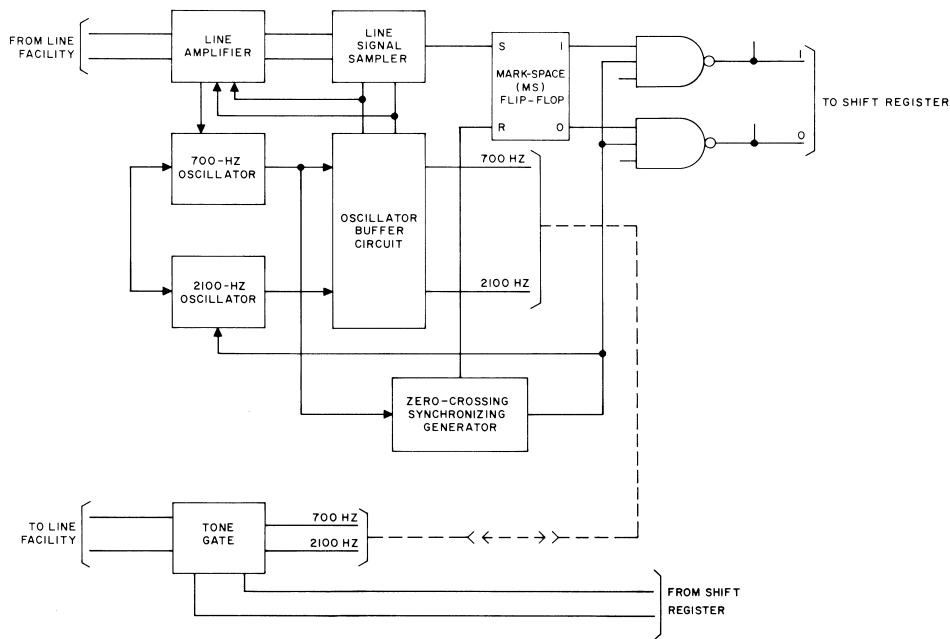


Fig. 10—Basic Data Receiver (Remote End)—Block Diagram

zero-crossing at the beginning of transmission and should not be confused with *cell* 25 which represents what is being transmitted out at any given instant.

CONSOLE LAMP CONTROL CODE FORMATS

6.04 The code formats for the 24-bit data portion of the word used to control the states of lamps on the centrex attendant consoles are shown in Fig. 11. The code is composed of a 7-bit lamp control prefix and a 17-bit variable-format lamp state code. The code shown is used to control the 1B- or 27A-type consoles and is modified somewhat to control the 2B- or 47A-type consoles (6.18 and 6.19).

A. Lamp Control Prefix

6.05 The seven most significant bits of the code make up the lamp control prefix, which performs the following functions.

- (a) Bit 22 is a lamp signal present (LSP) bit, or flag, which indicates to the console control circuitry that the word being received is a valid lamp order. If bit 22 is not a 1, the word may be a maintenance order (6.28).
- (b) For lamp orders, bits 20 and 21 form the console select code. This selects the particular one of four possible console control units to which the lamp order is to be directed. (See console select code table in Fig. 11.)

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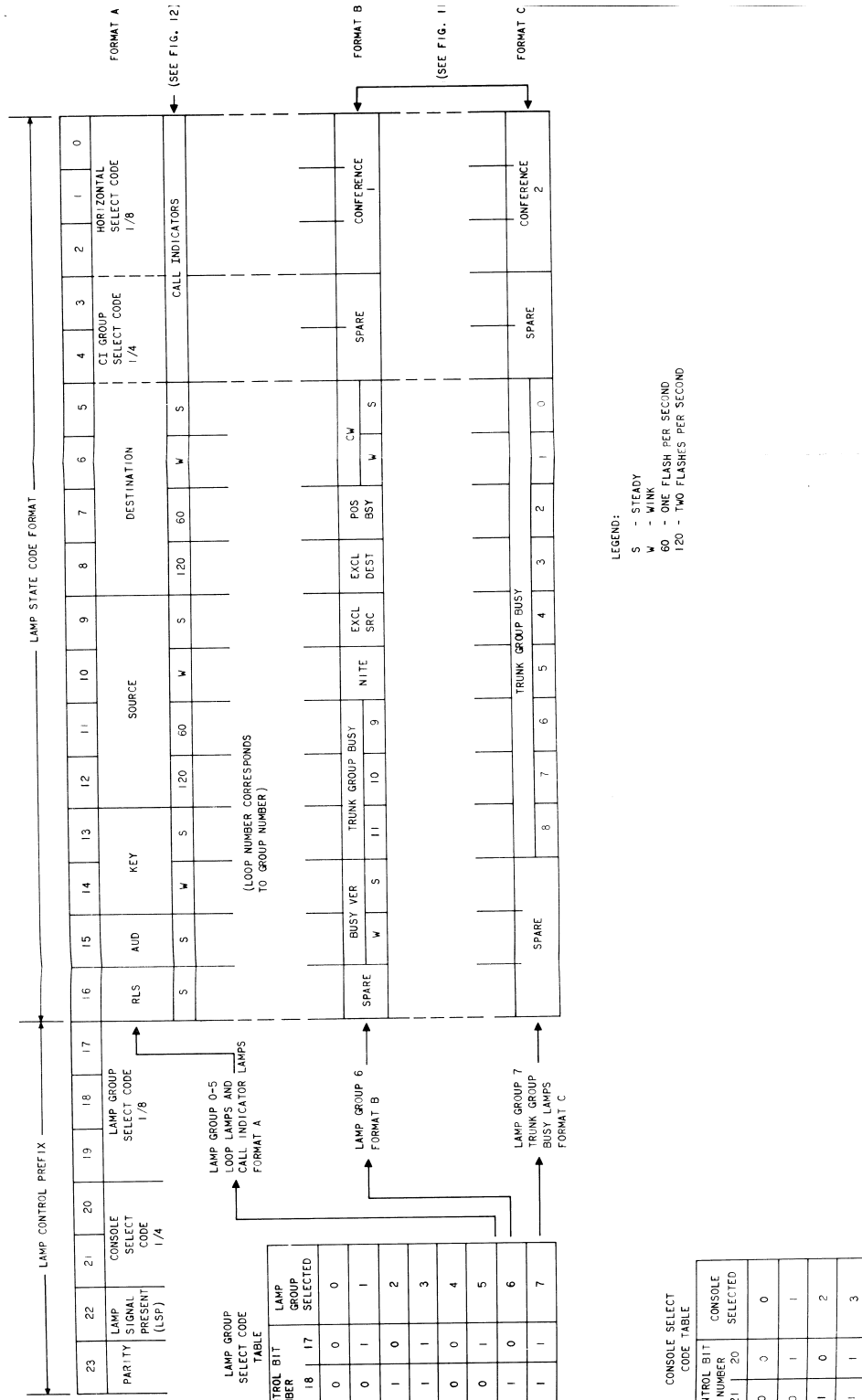
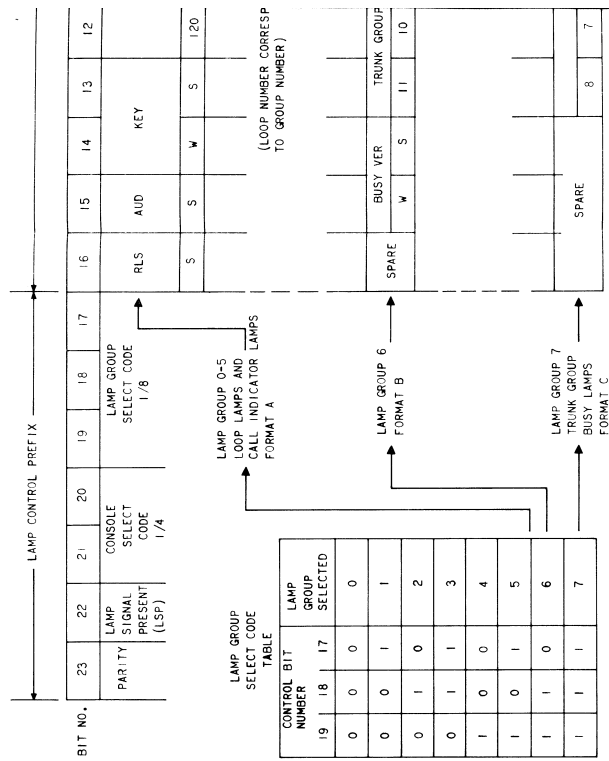


Fig. 11—Centrex Lamp Control Code Format



CONSOLE SELECT
CODE TABLE

CONTROL BIT NUMBER	21	20	CONSOLE SELECTED
0	0	0	0
0	0	1	1
1	0	0	2
1	1	1	3

(c) Bits 17, 18, and 19 form the lamp group select code. These bits determine which group of lamps on the selected console is to be controlled. (See lamp group select code table in Fig. 11.)

6.06 The lamps on the attendant consoles are controlled by three different lamp state code formats associated with console control units. These formats are shown in Fig. 11. **Format A** is used to control the six groups of loop lamps (KEY, SRC, and DEST lamps), the RLS lamp, the audible signal, and the call indicator lamps. **Format B** is used to control the common lamps and some of the trunk group busy lamps. **Format C** is used to control other trunk group busy lamps and is associated with the optional trunk busy memory [OTBM (6.18 and 6.19)].

B. Lamp State Code Formats

6.07 A single bit in the lamp state code format is provided for each allowable active lamp state. The selected lamp is operated to the chosen active state by the presence of a 1 in the proper bit slot. An exception to this is the operation of the call indicator lamps, which is explained in 6.16 through 6.18.

6.08 A 0 in a particular lamp code position will cause that lamp to be extinguished whenever that lamp group is selected.

Loop Lamp Format (Format A)

6.09 If the lamp group select code (table in Fig. 11) is between 000 and 101 (binary code), a corresponding loop lamp group (decimal 0 through 5) is selected and the loop lamp format (FORMAT A) is transmitted to control the lamps in this group. Any bit position (5 through 16) which contains a 1 in a word transmitted to the consoles will operate the selected console lamp to the chosen state. For example, if bit 9 is a 1 and a loop lamp group is specified, the SRC lamp of the specified loop lamp group is operated to the steady (S) state.

6.10 The RLS lamp, the audible signal, and the optional call indicator lamps may be operated by data addressed to either of the six groups of loop lamps.

6.11 As shown in Fig. 11, some lamps may be operated to only one active state while others

may be operated to one of several selected states. If none of the bit slots for a particular lamp contain a 1, the lamp is placed in the inactive state.

Format B

6.12 When the lamp group select code is binary 110 (lamp group 6), lamp format B is specified. A selected lamp here is also operated to the chosen active state by the presence of a 1 in the proper bit slot. This format controls three of the trunk busy lamps in addition to the other lamps. Format B also includes control of the five states of the conference 1 lamp. This is a function of lamp group 6 and bits 0, 1, and 2 as translated into a 1-out-of-8 selection.

Trunk Group Busy Lamp Format (Format C)

6.13 When the group select code is binary 111 (lamp group 7), the trunk group busy lamp format is specified. This format controls a field of nine additional trunk group busy lamps. A 1 in the proper bit slot will also operate the selected lamp to the active state. Format C also controls the conference 2 lamps in a similar manner to Format B (6.12).

C. Lamp State Memory

6.14 A lamp state memory associated with a centrex cabinet can be defined in two parts. They are the loop and miscellaneous lamp memory (LMLM) and the call indicator lamp memory (CILM). In addition, there is an OTBM which is a separate unit mounted in position No. 1 of the first cabinet associated with the large (2B- or 47A-type) consoles. The OTBM is discussed further in 6.19. In a lamp memory, a bipolar ferreed crosspoint is associated with each active lamp state. These ferreed crosspoints are mounted in 241C 1 by 8 switches. Twelve of these switches comprise an LMLM unit, in which most of the lamp states of an attendant telephone console are stored. Figure 12 is a block diagram of an LMLM unit. Three 241C 1 by 8 switches are used for the CILM. Figure 13 is a block diagram of a CILM. The LMLM and CILM, as well as associated lamp driving and miscellaneous circuitry, share a console control unit position. One lamp state memory is provided for each console. The operation of a ferreed crosspoint in a lamp state memory actuates the corresponding active state by connecting the selected lamp either to ground for steady or to the appropriate lamp

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interrupter for wink, 60 interruptions per minute, or 120 interruptions per minute, respectively.

D. Lamp State Changes in the LMLM

6.15 Each change of state of a lamp on a console requires the complete updating of the whole lamp group of which the lamp is a part. Updating is accomplished when another data word is received. The updating operation requires two steps. First, all ferreed crosspoints in the selected lamp group are released, thus erasing the previous lamp states; then, for each 1 in the lamp state code of the new data word received, the corresponding ferreed crosspoint in the selected lamp group is operated. An all-zero code in a particular lamp code position causes that lamp to be extinguished and remain extinguished when that particular code word is received at the customer location.

6.16 The call indicator lamp field is also controlled by Format A (Fig. 11). Bits 0 through 4 are assigned to their control. A maximum of 24 call indicator lamps per console can be controlled by these bits.

6.17 Call indicator lamps indicate to the console attendant information concerning the origin of the call currently being processed; therefore, only one lamp in the call indicator group is illuminated at one time. The indication remains on the console long enough for the attendant to be aware of the call's origin.

6.18 A separate memory unit (Fig. 13), consisting of three 1 by 8 ferreed switches, is provided for call indicator lamps. Ferreed crosspoints in the call indicator memory are controlled in four groups of six lamps each. Bits 0, 1, and 2 of Format A are arranged in a 1 out of 8 horizontal select code and bits 3 and 4 in a 1 out of 4 vertical select code in order to select the desired lamp. Binary codes 001 through 110 provide an actual 1 out of 8 horizontal selection from bits 0, 1, and 2, and binary codes 00 through 11 are used for the 1 out of 4 vertical (call indicator group) selection from bits 3 and 4. For example, to select call indicator lamp 5, the horizontal select code would be 010 and the vertical (CI group) select code would be 01. Each instruction to the call indicator memory requires a 2-step updating sequence. First, if one of the six ferreed crosspoints in the selected call indicator group was operated, the call indicator group is released. Then, a ferreed

crosspoint specified in the incoming code is operated. Binary code 111 (bits 0, 1, and 2) in the horizontal select code is used to reset all ferreed crosspoints and, therefore, turn off all lamps in the group selected by bits 3 and 4. Binary code 000 in the horizontal select code is used if the ferreed crosspoints in the call indicator memory are to be left unchanged.

E. Optional Trunk Busy Memory

6.19 The control of a 2B- or 47A-type console requires additional trunk busy memory beyond that available in the basic lamp state memory units. This is provided by a special trunk group busy memory unit (Fig. 14) which replaces one of the basic lamp state memories (specifically a console control unit).

6.20 The OTBM consists of three 1 by 8 ferreed switches equipped in memory unit position 1 of the first lamp control circuit associated with a 2B- or 47A-type console customer.

6.21 Figure 15 is a block diagram of the acceptable combinations of basic lamp state memory units and trunk busy memory (TBM) units which may be controlled by a single data loop circuit.

CONSOLE KEY FORMAT

6.22 Information from the centrex attendant consoles is transmitted to the central office as binary coded signals. These key signals are interpreted as requests for specific actions concerning calls that are associated with the consoles. Key signals from a single console require five bit spaces for encoding; therefore, the data register located in the console control cabinet has sufficient capacity to encode as many as four consoles. The contents of the register are read out serially as a 24-bit word during data transmission.

6.23 Figure 16 shows the key signal bit assignments for each of the four possible consoles. Four groups of five bits (0 through 19) are assigned for the key signals from each console; one bit (20) is a flag or KSP bit to indicate to the CC the presence of a valid key signal word; two bits (21 and 22) must be 0 when a key signal is to be transmitted; and bit 23 is a 0 (don't-care) bit.

6.24 The 31 possible codes which may be derived from a group of five bits are shown in Table A; 21 codes are presently used and 10 are

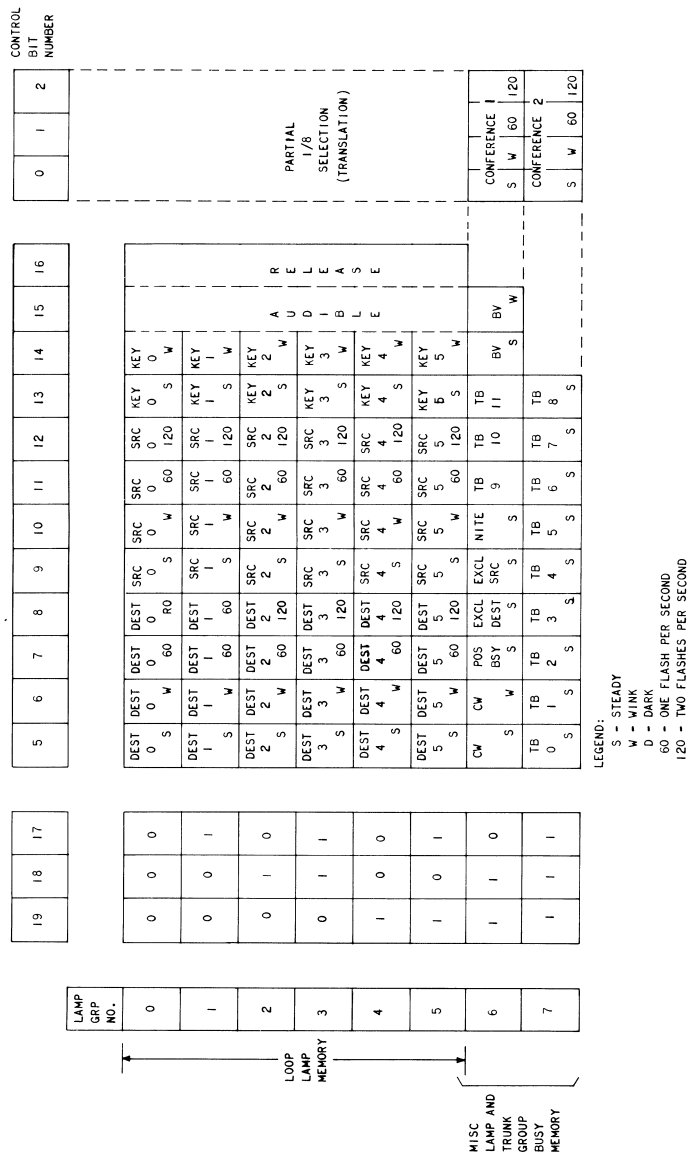


Fig. 12—Loop and Miscellaneous Lamp Memory (LMLM)

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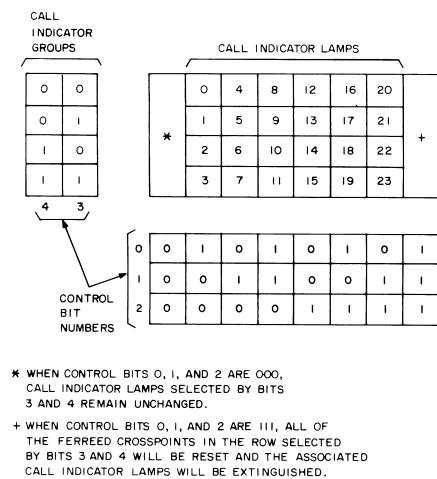


Fig. 13—Call Indicator Lamp Memory (CILM)

spares. The code is divided into three logical groups. This logical grouping facilitates the decoding of these key signals by the control program. The three groups are:

- Loop keys
- Console state keys
- Call processing keys.

6.25 Loop Keys: Decimal codes 1 through 7 are used to encode the loop keys on the consoles. There is one spare code available in this group.

6.26 Console State Keys: Decimal codes 8 through 10 are used to encode those keys which affect the overall state of the console or which have other certain specialized functions.

6.27 Call Processing Keys: Decimal codes 11 through 31 are used to encode those keys which are used in the processing of a particular call. There are seven spare codes available in this group. Decimal code 0 in any console key signal

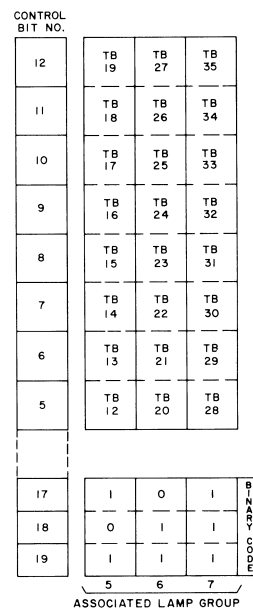


Fig. 14—Optional Trunk Busy Memory (OTBM)

slot indicates that no key signal was transmitted from that particular console.

MAINTENANCE ORDERS

6.28 Data can be encoded and transmitted to the shift registers in console control cabinets to perform maintenance functions. When data is transmitted to the control cabinet shift registers and bit 22 is a 0, the order is interpreted as a maintenance order. Bits 20 and 21 are then used to specify the maintenance function to be performed.

6.29 When bit 22 is a 0 and bits 21 and 20 are both 1s, the order is used to perform a loop-around test. This test checks the overall ability of the data loop to properly transmit and receive data. This order contains data which is transmitted to the shift register in the console control cabinet. A second transmission initiated

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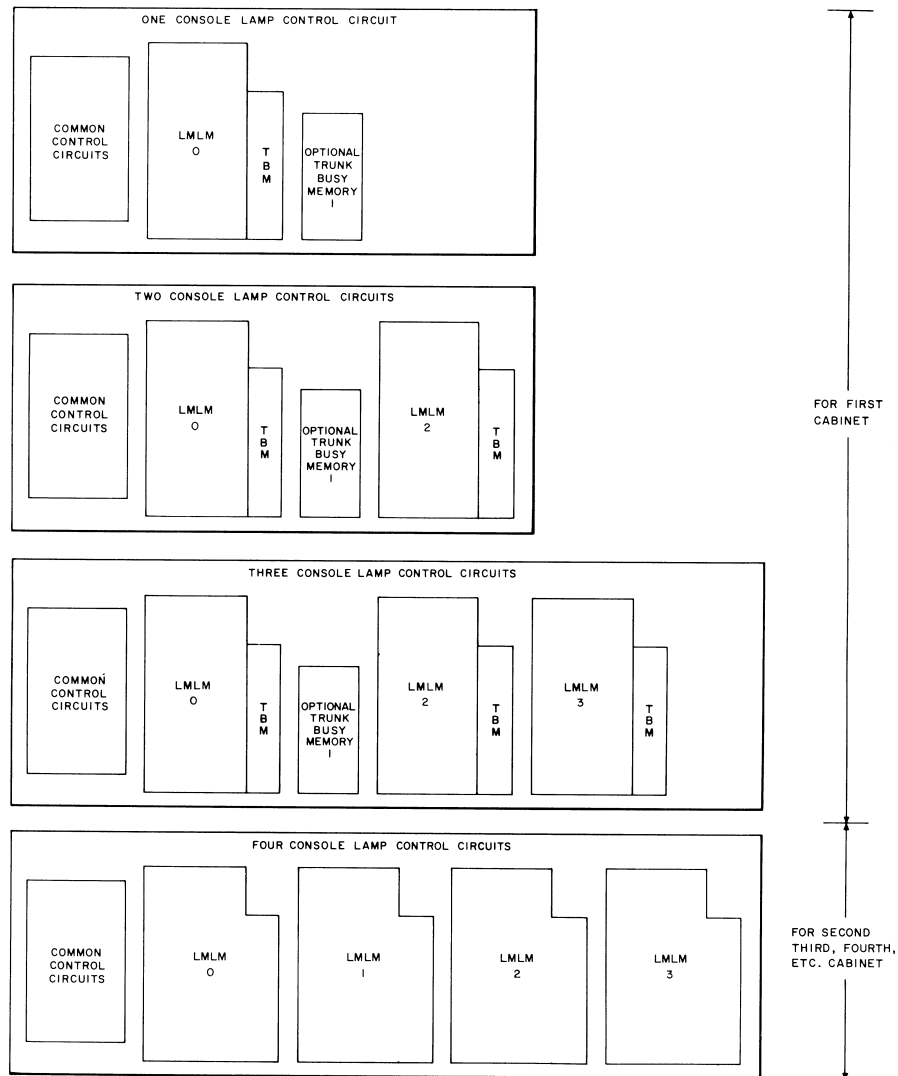


Fig. 15—Use of Optional Trunk Busy Memory in a 2B-Type or 47A-Type Console Installation

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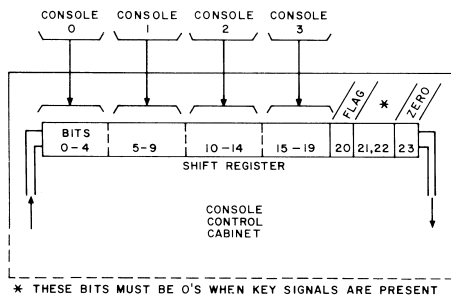


Fig. 16—Console Key Signal Bit Assignments

from the central office causes the data to be transmitted back to the central office.

6.30 When bit 22 is a 0, bit 21 is a 1, and bit 20 is a 0, the order is an interrogate order. This order is transmitted to a console control cabinet to determine the status of the POS BSY and the NITE lamps on each of the consoles controlled by the console control cabinet. This order also determines whether or not the customer's equipment is on emergency power or has fuses open.

6.31 As a response to the interrogate order, data is entered into the shift register in the console control cabinet and is transmitted back to the central office. This data contains bits which may be set to indicate the states of the NITE and POS BSY lamps of the consoles and the emergency power status of the console control cabinet. The bits which may be set and their indications are as follows:

- (a) Bit number 0—Console 0 NITE lamp lighted.
- (b) Bit number 1—Console control cabinet is on emergency power, ie, either a fuse is blown or battery voltage is low if so equipped.
- (c) Bit number 4—Console 0 POS BSY lamp lighted.
- (d) Bit number 5—Console 1 NITE lamp lighted.
- (e) Bit number 9—Console 1 POS BSY lamp lighted.

- (f) Bit number 10—Console 2 NITE lamp lighted.
- (g) Bit number 14—Console 2 POS BSY lamp lighted.
- (h) Bit number 15—Console 3 NITE lamp lighted.
- (i) Bit number 19—Console 3 POS BSY lamp lighted.

6.32 When bits 22, 21, and 20 as transmitted to the remote end are either 000 or 001, respectively, the order is a no-operation order. Bits 0 through 19 will be set to 0. These orders are used to clear the shift register in the console control cabinet of data and to prepare the register for the reception of key signals from the consoles.

6.33 When bits 22, 21, and 20 are 001, bit 20 will be changed to a 0 by the centrex data receiver and transmitter circuit.

7. THEORY—REMOTE DATA INTERFACE

7.01 Beginning with generic program 1E4, (1AE4), a centrex data link is available with the customer premises equipment and the controlling software designed to transmit translation-type data to a programmable terminal and to load data link orders in an output buffer. The customer premise equipment required for this data link is referred to as the remote data interface.

AUTOMATIC CALL DISTRIBUTION, PHASE 2

7.02 ACD phase 2 requires an RDI for the agent consoles and the other CU equipment to pass data for city of origin, call waiting, agent lamp information, key depressions, and CRT control. This RDI (Fig. 5) consists of:

- Modulator—Demodulator
- Interface
- Programmable Controller

The management information system (MIS) associated with ACD phase 2 requires another RDI (Fig. 5) which consists of:

- Modulator—Demodulator
- Interface

TABLE A
CENTREX CONSOLE KEY CODES

CONSOLE KEY OPERATED	BINARY CODE TRANSMITTED	EQUIVALENT DECIMAL NUMBER	KEY GROUPS
NONE	00000	0	LOOP KEYS
LOOP 0	00001	1	
LOOP 1	00010	2	
LOOP 2	00011	3	
LOOP 3	00100	4	
LOOP 4	00101	5	
LOOP 5	00110	6	
SPARE	00111	7	CONSOLE STATE KEYS
POS BUSY	01000	8	
NITE	01001	9	
SPARE	01010	10	
BUSY VER	01011	11	CALL PROCESSING KEYS
CONF. 1	01100	12	
CONF. 2	01101	13	
CAMP-ON	01110	14	
RLS TTRK	01111	15	
RLS	10000	16	
RLS SRC	10001	17	
RLS DEST	10010	18	
START	10011	19	
SIG SRC	10100	20	
SIG DEST	10101	21	
HOLD	10110	22	
EXCL SRC	10111	23	
EXCL DEST	11000	24	
SPARE	11001	25	
SPARE	11010	26	
SPARE	11011	27	
SPARE	11100	28	
SPARE	11101	29	
SPARE	11110	30	
SPARE	11111	31	

SECTION 231-037-000**Buffer-Multiplexer**

This RDI is able to multiplex up to 4 data links. In addition, an MIS interfaced unit must be used. These data links pass information which is primarily traffic oriented, such as the state of agent consoles, queues, trunk groups, simulated facilities, and reconfiguration information from the customer.

AUTOMATIC CUSTOMER MESSAGE OUTPUTTING SYSTEM

7.03 The ACMOS provides call data to customer owned and maintained hotel/motel property management system through an RDI. ACMOS will report all completed local message unit calls for each TN to the customer for immediate billing purposes and identify the calling and called lines on selected intercom calls. The RDI (Fig. 5) consists of:

Modulator-Demodulator

Interface

Buffer—Multiplexer

The customer must furnish an MIS interface unit.

CUSTOMER OWNED AND MAINTAINED MIS EQUIPMENT

7.04 Customer owned equipment which is capable of requesting and/or receiving data from the ESS requires an RDI. This RDI (Fig. 5) consists of:

Modulator-Demodulator

Interface

Buffer-Multiplexer

The customer must furnish an MIS interface unit.

8. THEORY — POWER, FUSES, AND FUSE ALARM

8.01 *Centrex Console Control Cabinet Power Requirements:* The centrex console control cabinet, located at the customer premises, is designed to normally operate from a standard 117-volt ac outlet provided by the customer. An optional battery supply, 105E power plant or equivalent, is available for the centrex cabinet. The power drawn varies according to the number

of consoles provided and the amount of attendant traffic. A centrex console control cabinet fully equipped with four attendant telephone consoles requires a maximum of 400 watts (approximately 3.4 amperes) at periods of peak traffic.

8.02 In the centrex office each data link is protected by a separate fuse that has its designation related to the link number. Power is applied by pressing a dual-state single pushbutton which, when operated, removes power from that link. Power is removed and restored on an individual data link basis. When power is removed, the associated red key-lamp lights. The restoration of power is sequenced so that power is applied to the circuit prior to the removal of clamping grounds. This sequence of events during power restoration ensures that the link circuit is left in a reset state. This applies to both transmitting and receiving circuitry.

8.03 The fuse alarm consists of a common alarm indication for the bay. The fuse alarm relay operates if any fuse in the bay is opened. The state of this relay is further indicated by a scan point connection which is assigned on a bay basis. Power-off or a fuse alarm condition is indicated by the red PWR OFF lamp.

9. MAINTENANCE**GENERAL**

9.01 The maintenance philosophy of the centrex data loop is based on the hardware design as well as software and manual fault detection and diagnosis. The maintenance aids used are the centrex data link and console demand exercise (CXDX) program for the software and the maintenance teletypewriter (TTY) for manual diagnosis.

9.02 Improper console lamp operations and key signals may be caused by faults occurring in an attendant console, a control cabinet, interconnecting data link circuitry, or the 2-wire No. 1 or 1A ESS central office equipment. When a fault becomes apparent at the attendant consoles, attempts may be made at the ESS central office to determine and to correct the faults. Data link diagnostic programs may be requested automatically (through parity checks) or manually (from the maintenance TTY) to determine if the fault is occurring in the data link circuitry. If the trouble cannot be located and corrected from the central office, it may be necessary for maintenance personnel

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to go to the centrex customer's location to aid in determining the trouble. When a fault causing a trouble occurs at a centrex customer location, its cause may not be readily apparent to maintenance personnel on the customer's premises. By requesting that the ESS central office perform the CXDX program, routine exercises may be directed to the desired console (and associated equipment) to aid in locating and identifying the fault. These routines may be performed **only** on consoles and console controls (TBM units) which previously have been removed from service by the proper TTY input message.

SOFTWARE TEST PROCEDURES

9.03 The CXDX program is capable of encoding and transmitting data which attempts to operate the lamps on the consoles to all of the states to which they may be normally operated. The CXDX program can also receive and analyze key signal data originating from consoles. When key signals are analyzed by the CXDX program, a signal is encoded and is then transmitted back to the console to indicate to personnel at the console whether or not the proper key signal was received. Lamps or keys may be exercised either individually or in special sequences.

9.04 The CXDX program may also be requested to verify the overall operations of newly installed consoles. This should be done prior to permitting the release of consoles for customer use.

9.05 When a major trouble (loss of console power) occurs at the console or when troubles occur in the data link serving the console control cabinet, the use of the CXDX program may not be practical.

MANUAL TEST PROCEDURES

9.06 The maintenance TTY is utilized to control the data links and associated attendant consoles. Maintenance personnel can use several maintenance features which are provided by the centrex maintenance supervisory program. These are as follows:

- (a) To unconditionally restore to or remove from service a data link
- (b) To force the data link to use a specified bus and/or CPD choice

- (c) To initiate the diagnosis of a specified link or all data links
- (d) To determine the status of all data links
- (e) To remove from or restore to service a single attendant console
- (f) To initiate the CXDX program to aid in console maintenance.

Reference should be made to Section 231-160-302 for explanations of the use of related TTY messages for diagnostic and demand exercises. Also, reference should be made to the input and output message manuals for exact details on the formats and use of all TTY messages.

10. REFERENCES

10.01 The following listing provides further information concerning the centrex data loop and console control.

SECTION	TITLE
231-160-301	Centrex Data Link and Console Demand Exercise Program Procedures
231-160-302	Centrex Data Link and Attendant Telephone Console Maintenance Procedures
966-100-100	2-Wire No. 1 and No. 1A Electronic Switching System General Description
966-102-100	2-Wire No. 1 Electronic Switching System Centrex CO Service
966-120-100	2-Wire No. 1A Electronic Switching System General Description
SD-1E059-01	Centrex Data Receiver and Transmitter Circuit
SD-1E063-01	Centrex Attendant's Console Lamp Control Circuit
SD-1A265-01	Centrex Data Link Circuit.

Simple Method to Defeat Outdoor Infrared Motion Sensors

Overview

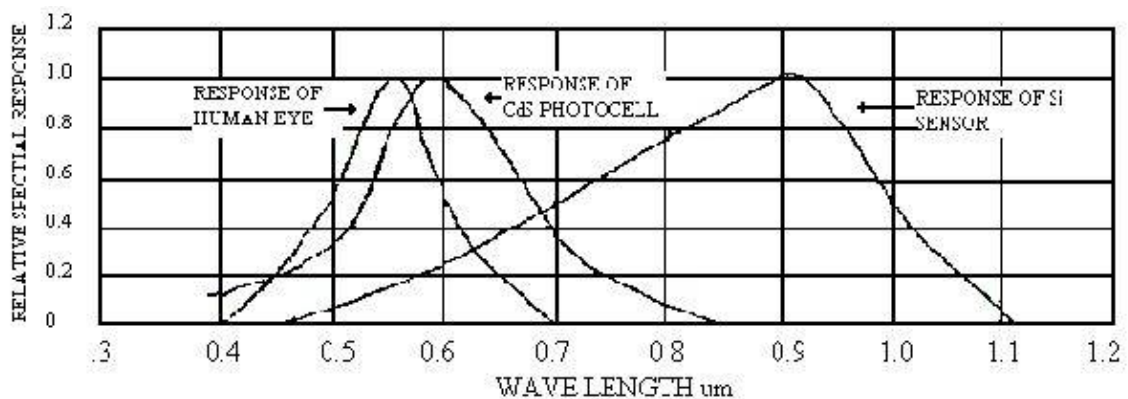
Outdoor motion-activated lights are fairly common. These are sensors which are usually placed in people's yards to activate a light upon the detection of any motion.

The actual "motion sensor" is just a common differential infrared detector (8–14 μm wavelength). The output of the infrared detector is slightly amplified then "pulse counted" to translate any motion into detection. The final control from the sensor is usually in the form of a relay triggering the external lighting system.

Most of these outdoor motion-activated lights are designed to only operate at night. They do this by incorporating a light sensitive cadmium-sulfide (CdS) photoresistor to monitor the general background light intensity. The resistance of these photoresistors is normally very high and lowers as the photoresistor is illuminated. The normalized response (wavelength) of CdS photoresistors follows that very closely of the human eye. That's to say, they are most sensitive to the "green" wavelengths between 500–600 nanometers. CdS photoresistors are only slightly sensitive to the 780 nm infrared wavelength available from common infrared laser diodes.

It's possible to trick an outdoor motion-activated light (at night) by shining a green laser onto the Fresnel lens of the infrared motion sensor. The internal reflection of the green laser light off the Fresnel lens will "light up" the internals of the infrared motion sensor. This essentially tricks the infrared motion sensor into believing it's daytime out. A suitable laser was described in *GBPPR 'Zine*, Issue #89 as the "GBPPR MIL-SPEC Laser Dazzler" project.

This is all easier said than done, though... Aiming the tiny green laser dot onto the Fresnel lens of the infrared motion sensor will require some type of support or pointing apparatus. One of those fancy "joystick" camera tripods from Manfrotto should do just nicely.



Wavelength Response of CdS Photoresistors

Common Laser Wavelengths & Descriptions

InGaN	405 nm	Common in Blu-ray DVD and HD DVD drives.
DPSS Green	532 nm	Frequency doubled from 1064 nm, green laser pointers.
AlGaInP	635 nm	"Brighter" red laser pointers.
GaInP/AlGaInP	650 nm	Low-cost red laser pointers.
GaAlAs	780 nm	Common in CD players. (non-visible)
GaAlAs Pumps for DPSS	808 nm	Pump diode found in green laser pointers. (non-visible)
CO2	10,600 nm	Goes through smoke and fog, should also jam the infrared detector in the motion sensor.

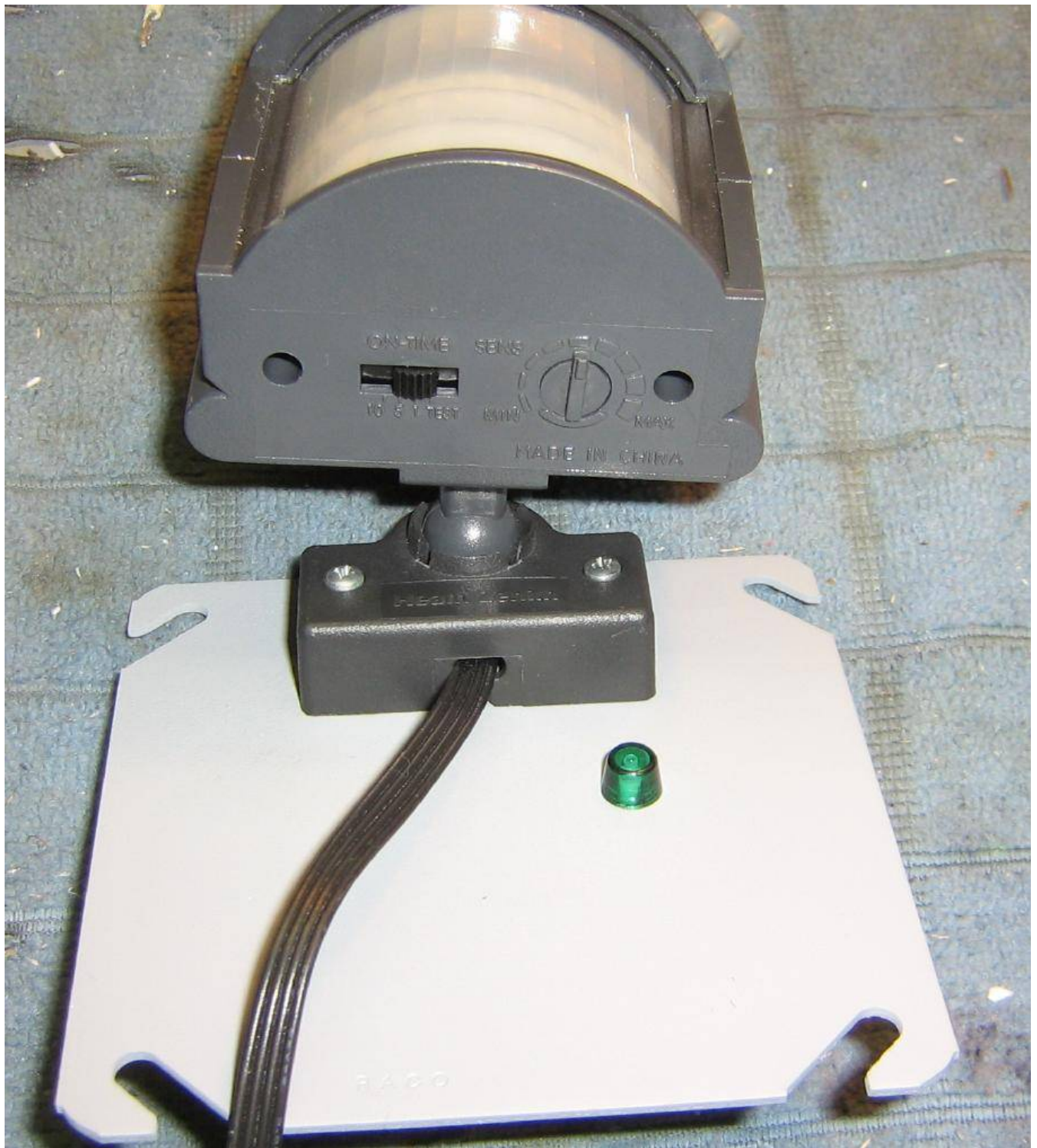
Pictures & Construction Notes



Test infrared motion sensor.

This is a standalone infrared motion sensor I made to trigger a small neon light when motion is detected.

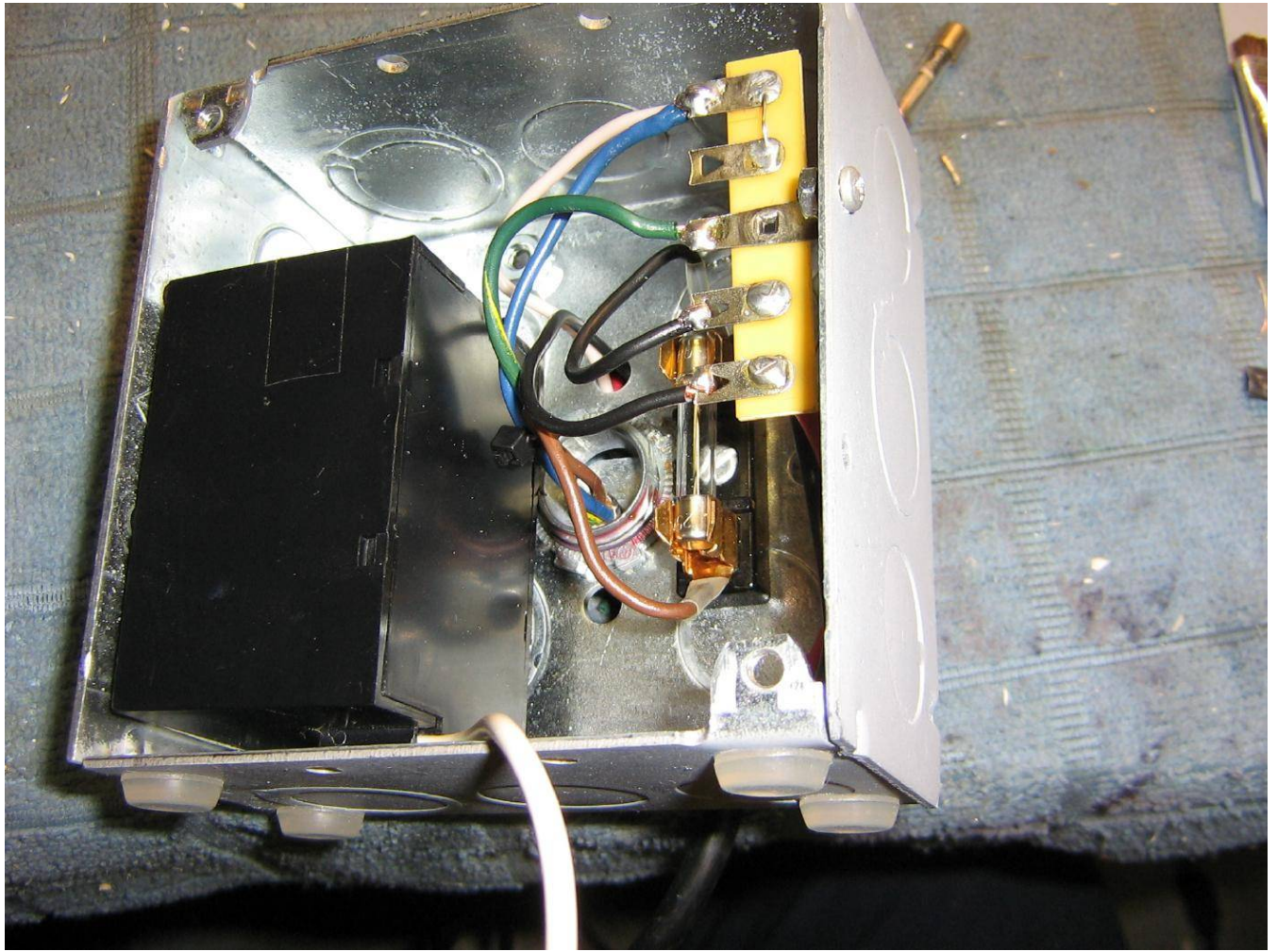
It's based on a standard relay output motion sensor I found at a local hardware store.



Bottom view of the infrared motion sensor.

There are four main on-time settings. Test, one second on, 5 seconds on, and 10 seconds on.

There is also a variable sensitivity setting which basically determines the detection range. Minimum sensitivity is fully-counterclockwise when viewed from the bottom.



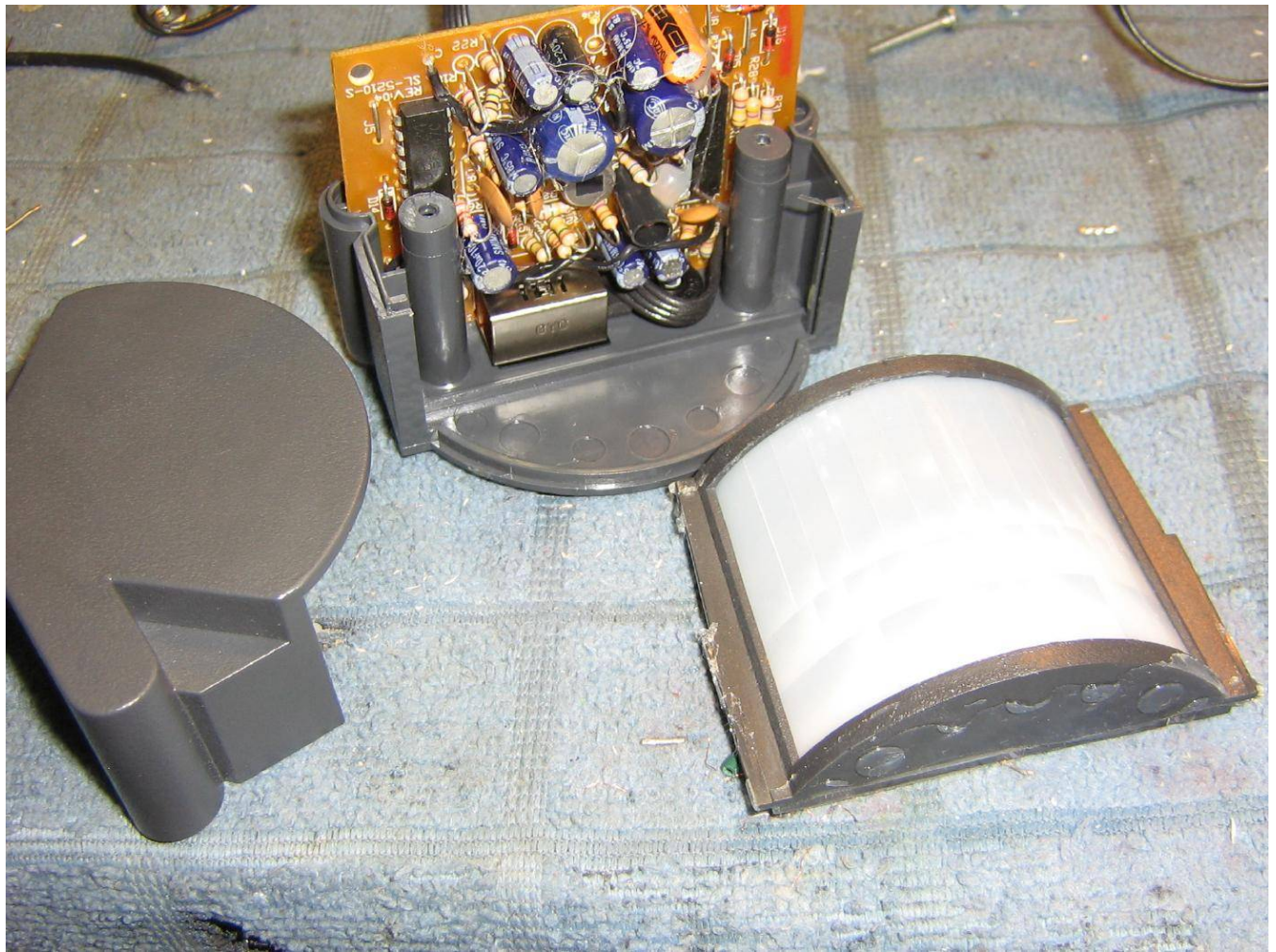
Internal wiring of the test infrared motion sensor.

Nothing really fancy, just follow the wiring diagram in the motion sensor's manual.

There is a 10 amp fuse on the main AC input and an output terminal block in parallel with the triggered light wire. This was added for enabling external devices.

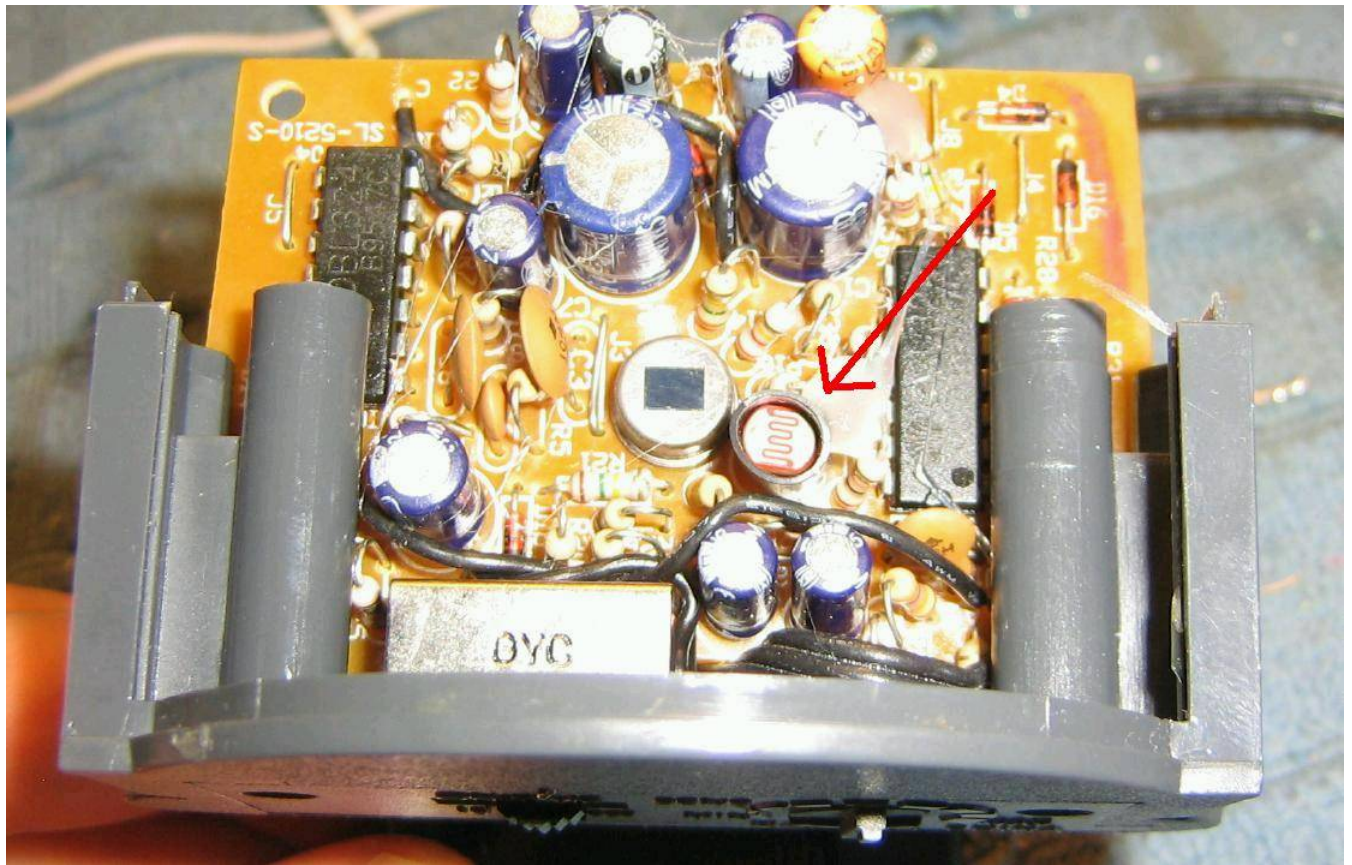


Rear view showing the output terminal block.



Internal view of the infrared motion sensor.

The Fresnel lens, which is used to create several "zones" for the infrared detector is on the lower-right.



Internal view of the infrared motion sensor.

The main infrared detector is the silver circular device in the middle. The dark rectangle is an infrared filter ahead of the actual sensor.

The CdS photoresistor is the device to the right of the infrared sensor. It has a little black "hood" to direct the field-of-view to that of the infrared sensor.

The CdS photoresistor is the device we wish to "jam" with the laser pointer.

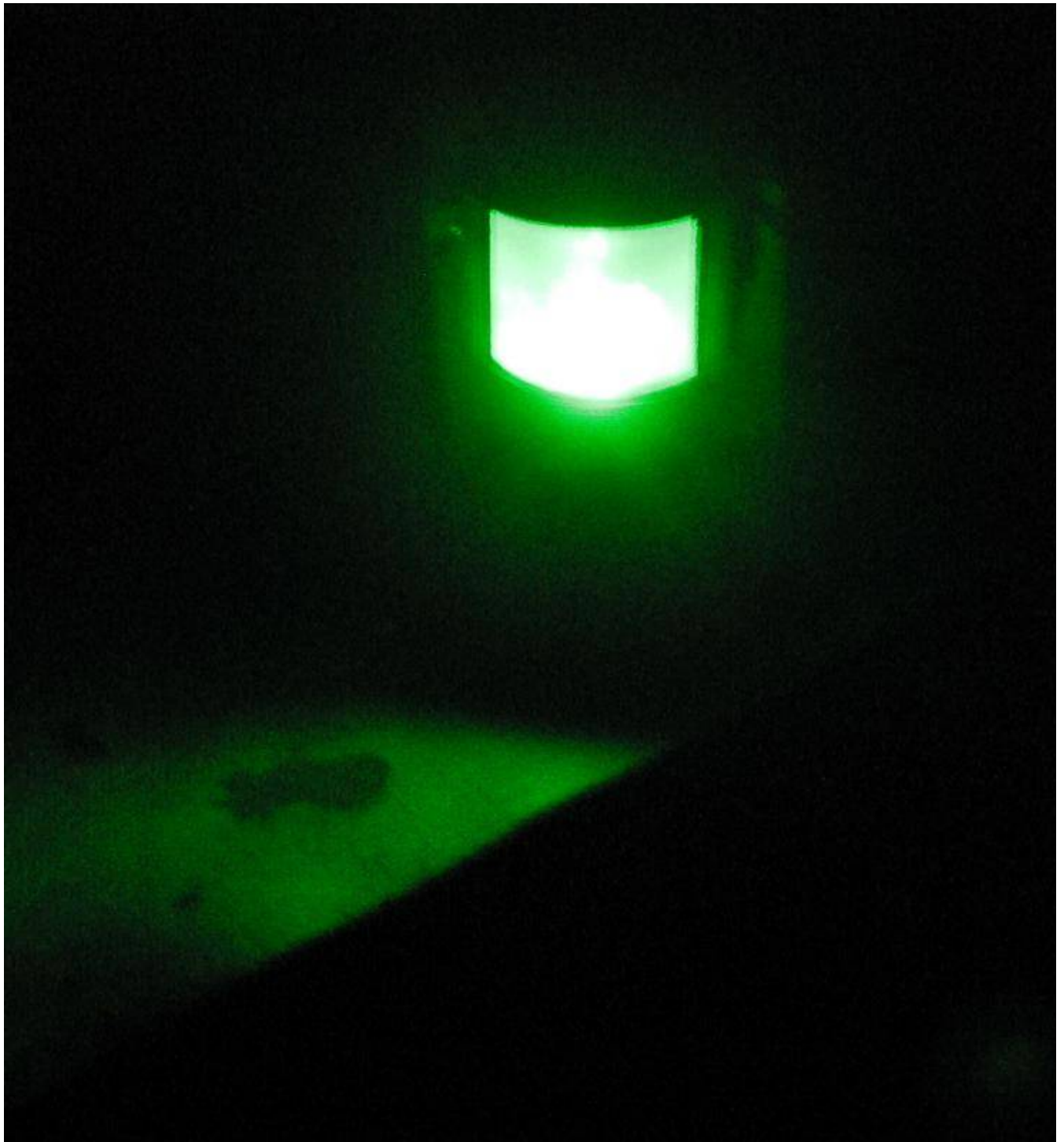


Overview of the test motion sensor and the GBPPR MIL-SPEC Laser Dazzler from *GBPPR 'Zine*, Issue #89.



Example infrared motion sensor jamming with the GBPPR MIL-SPEC Laser Dazzler.

The slightly expanded laser beam from the dazzler is very useful for keeping the laser on the target motion sensor.

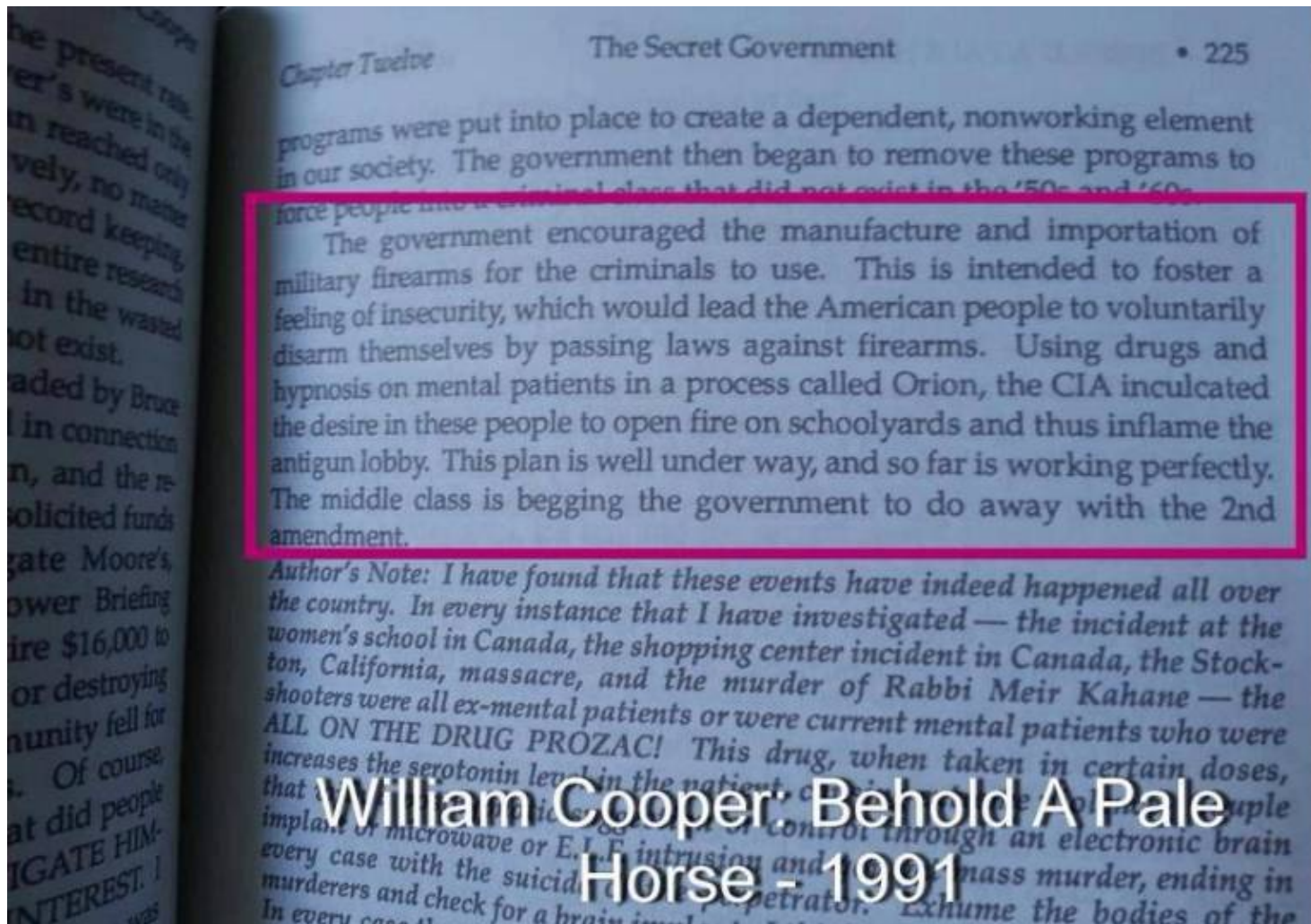


Real-world testing.

I was able to sneak up on the motion sensor by "jamming" the CdS photoresistor with the green laser dazzler.

Keeping the laser dot on the sensor's Fresnel lens was quite tricky. It would probably be a better idea to setup a laser jammer (with an expanded beam) a hundred feet away or so, pointing at the target motion sensor.

Bonus



Excerpt from Bill Cooper's *Behold a Pale Horse*, which was written in 1991.

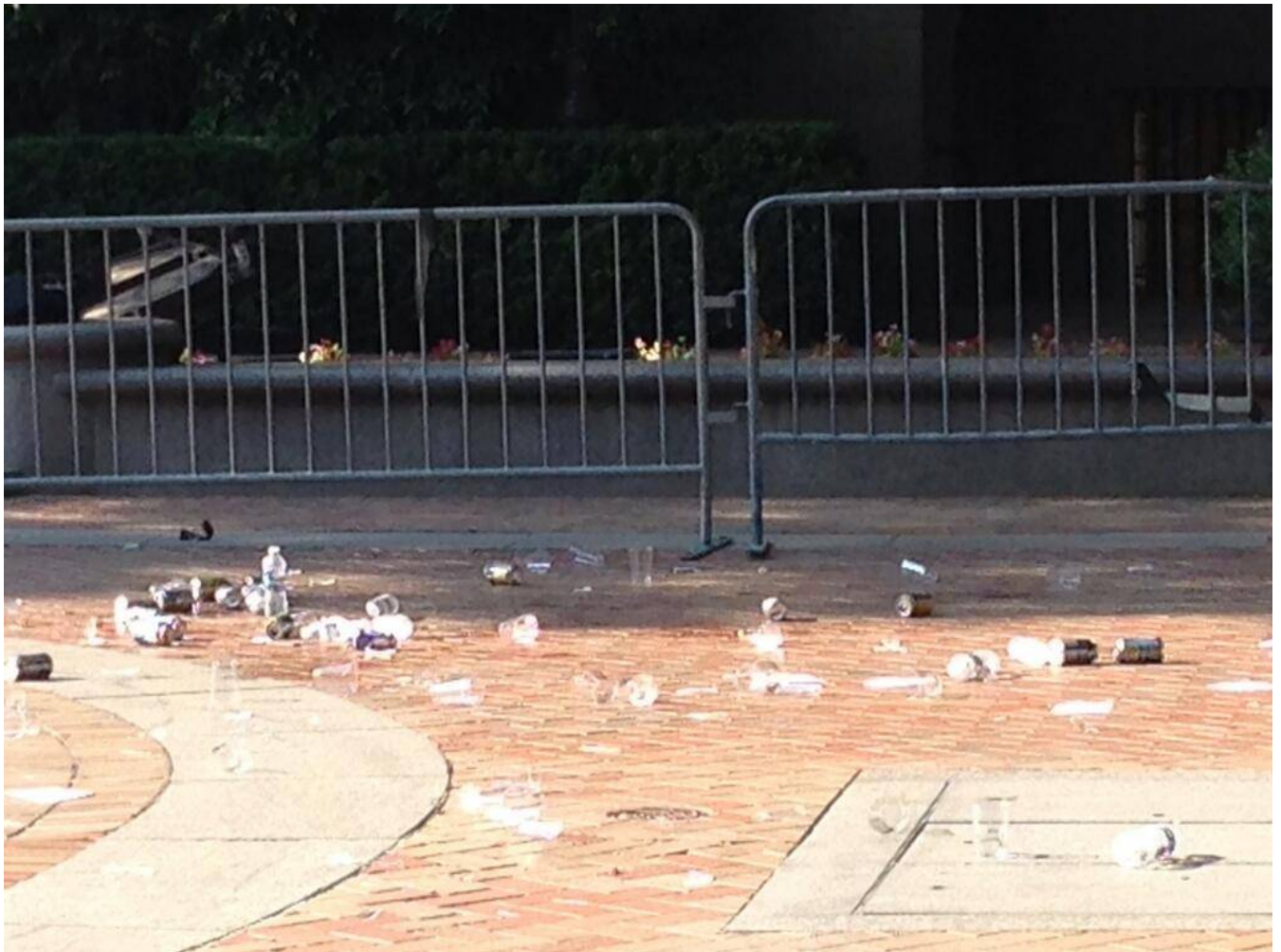
Kinda sounds like "Fast & Furious" and all other shooting/gun scandals, doesn't it?

End of Issue #111



Any Questions?

Editorial and Rants



Garbage left behind after Obongo's speech on "climate change."

twitter.com/AmyAHarder/status/349648025611800576/photo/1

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FEDERAL BUREAU OF INVESTIGATION

Precedence: ROUTINE

Date: 10/19/2011

To: Jacksonville

From: Jacksonville

Squad 10/FIG/CSCC

Contact: DMC [REDACTED]

Approved By: [REDACTED]

Drafted By: [REDACTED]

kah

Case ID #: [REDACTED]

Title: DOMAIN PROGRAM MANAGEMENT
DOMESTIC TERRORISM

On 13 October 2011, writer sent via email an excerpt from the daily [REDACTED] regarding FBI Houston's [REDACTED] to all IAs, SSRAs and SSA [REDACTED]. This [REDACTED] identified the exploitation

b6
b7A
b7C
b7E

of the Occupy Movement by [REDACTED] interested in developing a long-term plan to kill local Occupy leaders via sniper fire.

b6
b7C

~~SECRET//NOFORN~~

[REDACTED]

1. (U//LES) An identified [REDACTED] as of October planned to engage in sniper attacks against protestors in Houston, Texas, if deemed necessary. An identified [REDACTED] had received intelligence that indicated the protestors in New York and Seattle planned similar protests in Houston, Dallas, San Antonio, and Austin, Texas. [REDACTED] planned to gather intelligence against the leaders of the protest groups and obtain photographs, then formulate a plan to kill the leadership via suppressed sniper rifles. (Note: protests continued throughout the weekend with approximately 6000 persons in NYC. "Occupy Wall Street" protests have spread to about half of all states in the US, over a dozen European and Asian cities, including protests in Cleveland 10/6-8/11 at Willard Park which was initially attended by hundreds of protestors).

[REDACTED]

Excerpts from several October 2011 FBI documents obtained by the Partnership for Civil Justice Fund.

View the full documents here: justiceonline.org/docs/fbi-occupy-documents-1.pdf

The FBI wanted snipers to kill the "leadership" of the Occupy Wall Street movement in case the 99% grew tired of all the bullshit and started to fight back.

If the FBI's actions are not considered "terrorism," then I don't know what is.

And I better not warn you that "tyranny is always lurking just around the corner," or Obummer may drone strike me...



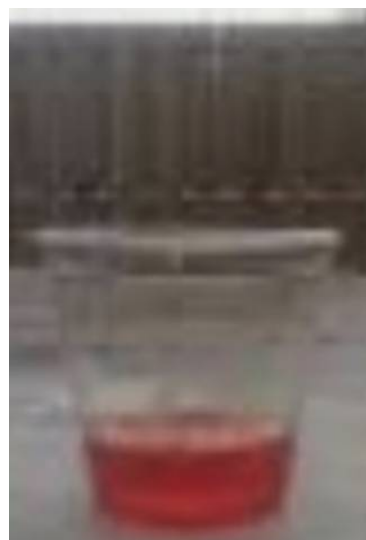
Blatant CNN Lie During the George Zimmerman Trial

The witness, John Good, *clearly* stated in court that the "lighter-skin" person was on the bottom and was being straddled by a "darker-skin" person.

Good said the darker-skin appeared to be holding down the lighter-skin person and punching him "MMA style."

He also said he did not see the person on the bottom throw any punches at the person on top of him, and the person on the bottom was also calling for help – and wearing red clothes similar to Zimmerman's at the time.

The Juden-media is going out-of-their-way to cover for the "NO_LIMIT_NIGGA."



Also, the media kept saying Trayvon was carrying "ice tea and Skittles."

He was actually carrying Arizona Watermelon Fruit Juice Cocktail, which when mixed with candy and prescription-strength cough syrup containing codeine, makes some sort of nigger drug called "sizzurp," "purple drank," "lean," or some other fine nigger invention.

The picture on the right was taking from Trayvon's cell phone. It looks like it could be cough syrup.

The screenshot shows a web browser window displaying a Gawker article. The URL in the address bar is gawker.com/5897485/white-supremacist-hacks-trayvon-martins-email-account-leaks-messages-online. The article is by Adrian Chen, dated 3/29/12 3:44pm, with 474,713 views and 834 comments. The headline is "White Supremacist Hacks Trayvon Martin's Email Account, Leaks Messages Online". Below the headline is a photo of Trayvon Martin. To the right of the photo is a blurred screenshot of an email subject line that reads "Trayvon, now is the best time to take the SAT! - Hi Trayvon, Since you have an ac...". The article text begins with "The racist smear campaign against Trayvon Martin, the unarmed black teen shot to death last month in Florida, has reached a new level of ghoulishness. A white supremacist hacker says he's broken into Martin's email and social networking accounts, and leaked his private Facebook messages. We've been able to confirm that at least one email account that belonged to Martin was cracked." A related article link is also visible: "Your Guide to the Idiotic Racist Backlash Against Trayvon Martin".

(gawker.com/5897485/white-supremacist-hacks-trayvon-martins-email-account-leaks-messages-online)

Another fine bit of Trayvon Martin propaganda is this Gawker article by Adrian Chen.

After Trayvon Martin's email were allegedly hacked by "Klanklannon," Gawker attempted to spin the story by saying the emails show Martin was just a normal teenager getting ready for college. They didn't seem to want to cover all the drug references, though.

In Chen's article, they use the stereotypical younger Trayvon Martin photo along with a blurred screenshot of Trayvon Martin's email subject lines.

Note how the only unblurred subject line mentions "Trayvon, now is the best time to take the SAT!"

A reminder from his teachers, guidance counselors, or parents?

Nope!

It's actually spam! Lots of people, especially high school students, get spam emails with this *exact* same subject line!

Note that Gawker often uses sensational headlines and stories in order to generate ad views and clicks for revenue – just like most of the other tabloid websites.

Two Black Brothers Torture & Murder a 12 Year Old White Girl in order to steal parts from her BMX bicycle. And not a word about this in the national press. Trayvon Martin was international news but this news story is being buried quickly!



Autumn Pasquale



Justin Davidson



Dante Robinson

No outrage in the media.



March 24, 2012

John Sanderson (left) was shot to death at his college dorm by the three men pictured below. The perps were filmed by surveillance cameras and have been arrested. Their motive is unknown. But it did not matter to Leftist race-baiters what George Zimmerman's actual motives were when he shot Trayvon Martin on **Feb 26th**, did it? What mattered was that the crime fit the Left's fictitious narrative about prejudiced whites and persecuted blacks. Seen any public statements or hoodie protests by outraged Democrats because *three* black guys killed *one* lone white guy? No. And you never will.



<http://www.cdipatch.com/news/article.asp?aid=16252> and [aid=16254](http://www.cdipatch.com/news/article.asp?aid=16254) and [aid=16271](http://www.cdipatch.com/news/article.asp?aid=16271)

No outrage in the media.



http://www.fox43tv.com/dpps/news/gang-indicted-for-racketeering_3774130

January 10, 2012

A one-time member of the Portsmouth Bounty Hunter Bloods street gang was sentenced Monday to life in prison for gunning down two brothers in a Cradock home invasion robbery. Jamya Rashad Brothers, 24, and his lawyers pleaded for a sentence of 35 years in prison, but U.S. District Judge Raymond A. Jackson, calling the killings "one of the most heinous crimes a man can commit in American society," gave him life. Brothers and another Blood went to the home of **Ronnie Trollinger** on Gillis Road one night in December 2007 with the intention of robbing him. Upon entering, Brothers almost immediately began shooting. Trollinger, 51, was shot in the chest and died. His brother, **John Trollinger, 49**, was shot in the chest and head and died. A third man was shot in the abdomen and survived.

<http://truecrimesblog.blogspot.it/2012/01/one-time-member-of-portsmouth-bounty.html>

<http://www.wvec.com/my-city/chesapeake/Victims-family-expresses-relief-after-indictment-of-accused-gang-members.html>

No outrage in the media.



Is the world finally waking up?



Will Americans ever wake up?